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PILOT STUDY OF FIVE METHODS OF PRESENTING THE SUMMER HEAD START CURRICULAR PROGRAM.

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Descriptors- *COMPARATIVE ANALYSIS, *CULTURALLY DISADVANTAGED, *CURRICULUM EVALUATION, *EXPERIMENTAL CURRICULUM, LANGUAGE PROGRAMS, MULTISENSORY LEARNING, *PRESCHOOL PROGRAMS, READINESS, TEACHING GUIDES, TEACHING METHODS, VOCABULARY DEVELOPMENT

Identifiers- Bereiter Program, Doman Delacato, Frostig Program, *Head Start

A pilot study was conducted to assess the effectiveness of five curricular methods used in a summer Head Start program designed to develop perceptual-motor skills. Three hundred and seventy-three inner-city children in 15 Head Start centers were given the Peabody Picture Vocabulary Test and the Brenner Developmental Gestalt Test of School Readiness at the beginning and end of the program. Children in the Frostig Experimental and Control Centers were pretested and posttested with the Marianne Frostig Developmental Test of Visual Perception. Children in the Doman Delacato Experimental and Control Centers were pretested and posttested for lateral and visual dominance in three areas: handedness, footedness, and eyedness. The methods used in the Bereiter Experimental Center were prescribed by the Bereiter curriculum. Teachers and aides filled out evaluative questionnaires. Test gains of Head Start center pupils were compared to gains of children in centers using curricular modifications. The total population showed improvement at the .01 level of significance on these variables: vocabulary, total school readiness, achievement-ability assessment, and social-emotional behavior. None of the experimental teaching methods was found to be strikingly superior to the multisensory program prescribed by the basic Detroit Head Start and kindergarten program. (MS)

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Detroit Public Schools

SUMMARY OF PROJECT EVALUATION

Research and Development March, 1968

Title Pilot Study of Five Methods of Presenting the Summer Head Start Curricular Program

Purpose To assess the effectiveness of five curricular methods of presenting the Summer Head Start Program in developing perceptual-motor skills of children.

Investigator Early Childhood Education Department and Research and Development Department, Joan M. O'Piela, Research Associate

Participants Three hundred seventy-three children enrolled in the 1967 Summer Head Start Program.

Period June 26, 1967 to August 18, 1967

Procedures The Peabody Picture Vocabulary Test and the Brenner Developmental Gestalt Test of School Readiness were administered to all subjects at the beginning and end of the Summer Head Start Program.

Children in the Frostig Experimental and Control Centers were pre- and posttested with the Marianne Frostig Developmental Test of Visual Perception. Children in the Doman Delacato Experimental and Control Centers were pre- and posttested for lateral and visual dominance in three areas, handedness, footedness, and eyedness.

Teachers and classroom personnel responded to evaluative questionnaires at the end of the program. Teachers in the Experimental Head Start Experience Record Centers evaluated the experimental Experience Record Form and the experimental handbook, Young Children In School.

Analysis Raw score gains on tests administered to Head Start pupils were computed for comparison of gains among Head Start Centers employing modifications in the basic Head Start curricular program.

Findings The data indicate that the total Head Start population showed improvement at the .01 level of significance on the variables evaluated: vocabulary, total readiness for school, achievement-ability assessment, and social-emotional behavior.

Boys in the 4-4.11 age range had lower basal scores on all variables than girls of the same age. The mean gain in vocabulary raw score for both boys and girls was 1.9; however, the basal score of girls was 1.3 higher than that of the boys. The boys' gain score of 9.7 in overall readiness (significant at .01) was 2.9 points higher than the girls significant gain score of 6.8 in overall readiness.

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There was a positive shift in both numbers and percents of children from the low readiness category right on through the high readiness designation from pretest to posttest.

Conclusions

The overall readiness totals of the Head Start Experience Record Control schools show superiority over the Head Start Experience Record Experimental schools in mean gains except in one experimental center, but inferiority to the Head Start Experience Record Experimental schools on the vocabulary mean gains in raw score.

The Doman Delacato Experimental and Bereiter Experimental groups showed superiority over the Frostig Experimental and Control groups in mean gain of total school readiness but inferiority to the Frostig Experimental and Control groups on mean gains in vocabulary raw score

There is no evidence in the data collected and reported in this study of the overwhelming superiority of any one of the curricular methods tried and observed in which the teaching emphasis is different than prescribed by the basic Detroit Head Start and Kindergarten curricular multi-sensory program.

Teachers reported that the experimental handbook, Young Children In School, was very helpful in identifying curriculum practices which aid in teaching skills necessary for successful school experience.

SUMMER HEAD START RESEARCH, 1967

The purposes of the research in the 1967 Summer Head Start Program were to establish evaluative base line data about the perceptual-motor skills of children in the program and to examine (on a pilot basis) the merits of five methods of presenting the Head Start curricular program.

The data from the study may assist in the selection of curricular programs for any follow-up program in which these children are enrolled. The data may also be important for any school interested in providing the experiences children need to prepare them to read in the primary unit of their school experience.

The Detroit Summer Head Start Program did not attempt to teach reading. The emphasis in the summer Head Start curricular program was to present to the childre a variety of enrichment experiences which would foster perceptual-motor development. In this setting, the Head Start research was designed to examine five curricular approaches. A brief description of each curricular method follows:

1. Detroit Head Start with Experience Record (Experimental)

   This curricular approach embodied the guiding principles of the Detroit Head Start Program--perceptual and conceptual development through multi-sensory experiences. An experimental handbook, Young Children In School, was provided for teachers to use in making a selection of experiences fostering the building of basic skills that are necessary for successful school experience. A Head Start Personal Experience Record (Digitek Form) was devised to aid in projecting a profile of the kinds and depth of experiences children were having in auditory and visual discrimination, concrete and abstract quantitative thinking, fine and large motor control, and tactile learning. In addition to the staffing pattern found in all Detroit Head Start classrooms, one research aide was hired for each of the five Detroit Head Start Experimental Centers using the Experience Record to assist in the task of making observations and filling out the research forms.

2. Detroit Head Start Control Centers

   The curricular program in the control centers was the basic perceptual-conceptual multi-sensory program. Teachers were provided with the handbook, Young Children In School, but were given no specific procedures to follow as to its use. Teachers were free to select experiences from the handbook as needed to implement their program. The Digitek form, Children's Experience Record was not used in the control centers.

3. Frostig Experimental Center

   The bas[illegible]etroit Head Start curricular program was implemented with a multi-level training program designed to

foster perceptual skills. A perceptual training program and the assessment of the children as measured by the Marianne Frostig Developmental Test of Visual Perception, 1963 standardization were features of this program.

4. Frostig Control Center

The basic perceptual-conceptual multi-sensory program was the curriculum at this center. The children were pre- and posttested on the same instruments as was used in the modified Frostig Experimental Center, but did not receive the Frostig Perceptual Training Program.

5. Doman Delacato Experimental Center

In addition to the basic Detroit Head Start curriculum, the children in this center were given selected mobility training exercises as recommended in the Doman Delacato program. The children were pre- and posttested for handedness, footedness, and eyedness as recommended by the Doman Delacato program.

6. Doman Delacato Control Center

The children were tested on the same instruments as those in the Doman Delacato Experimental Center, but not given the mobility training exercises of the Doman Delacato program.

7. Bereiter Experimental Center

The curriculum at this center was the Beginning Language Program developed to accompany the book, Teaching Disadvantaged Children in the Preschool by Carl Bereiter and Siegfried Engelmann. The organization of the classroom, uses of material, and methods employed by the teacher and the center staff were specifically prescribed by the Bereiter curriculum.

The program at the Bereiter Experimental Center provided for periods of language, mathematics, music, and food activities (including a snack and lunch) during the daily Head Start Session. There was no scheduled play period. Stories were read to children upon arrival. At preparation for dismissal time, children were encouraged to use puzzles, and other manipulative materials (usually 10 minutes). The Teacher prepared audio-visual materials such as bulletin boards, charts, and pictures were not in evidence, as it was felt that these materials would distract from the children's ability to pay attention to the instruction being given.

Another study designed to develop a check list to be utilized in describing children's play and behavior during play periods and provide a more systematic arrangement of play description and observation was conducted during the Head Start Program at Fairbanks School. This was an exploratory study to develop a check list which could be used on a follow-up study of the children who had been enrolled at the center and would be enrolled in the kindergarten during the regular school year.

The total sample studied in this assessment of motor-perceptual skills of children and curricular methods was 373. All subjects were enrolled in the 1967 Detroit Summer Head Start Program.

Procedures

The Peabody Picture Vocabulary Test and the Brenner Developmental Gestalt Test of School Readiness were administered to all subjects at the beginning and end of the Summer Head Start Program. All testing was completed by qualified testers under the direction of the Detroit Public Schools Department of Research and Development.

Children in the Frostig Experimental and Control Centers were also pre- and post-tested with Marianne Frostig Developmental Test of Visual Perception. Children in the Doman Delacato Experimental and Control Centers were pre- and posttested for lateral and visual dominance in three areas, handedness, footedness, and eyedness. These tests were administered under the direction of the coordinators at each center.

Teachers and classroom personnel were given opportunities to respond to evaluative questionnaires at the end of the program. Teachers at the Experimental Centers using the Head Start Children's Experience Record attended three conferences with a representative of the Research Department and the testing coordinator to discuss practical problems encountered in the use of the experimental handbook, Young Children In School and the Head Start Children's Experience Record.

Observations were made at all centers participating in the study, except the center developing the play check list by the Research Department personnel and the test coordinator.

Description of Instruments and Materials Studied

1. The Peabody Picture Vocabulary Test is a picture vocabulary test designed to provide an estimate of the subjects' verbal intelligence through measuring his hearing vocabulary.

2. The Brenner Developmental Gestalt Test of School Readiness is a test which is based on the developmental and learning principles, perceptual and conceptual differentiation abilities of the child. It is an individual performance test for the quantitative and qualitative evaluation of school readiness.

3. The Marianne Frostig Developmental Test of Visual Perception yields scores in five major perceptual areas: visual-motor coordination, figure ground, form constancy, position in space, and spatial relations.

4. The Doman Delacato Screening Sheet was an adaptation of a longer model in the battery of tests suggested by the Doman Delacato Program. This sheet was designed to assess handedness after observation of five tasks requiring use of the hands, footedness after observation of three tasks requiring use of the foot, and eyedness after observation of three tasks in sighting points.

A final determination of laterality (eye-hand dominance) is made for each child.

The handbook, Young Children In School is a booklet devised to assist preschool and kindergarten teachers in identifying curriculum practices that will aid her in teaching the skills necessary for successful school experience. Activities and materials are listed under specific skills that are taught: auditory discrimination and memory, visual discrimination and memory, quantitive thinking (concrete and abstract), motor control (fine and large), and tactile experiences. Most of the activities included in this handbook are from issues of Merrily.* This handbook has been a joint effort of the Early Childhood Education Articulation Committee of the Detroit Public Schools whose members are

Charlotte Gmeiner, Supervisor of Kindergarten
Joan O'Piela, Research Associate
Bertha Beyer Matthews, Language Development Specialist
Rosalind Braden, Director of Project Follow Through

The "Head Start Children's Experience Record" is a checklist prepared on an optical scanning form. It was designed to keep a record of both the depth and variety of learning experiences a subject had in the skill areas of auditory and visual discrimination, quantitative thinking, motor control, and tactile learning. The teacher was asked to record the number of times a child had experience in the skill areas. It was hoped that the checklist might help teachers focus on the recommended skill areas and select appropriate activities as suggested in the handbook, Young Children In School. At the same time, the sheet could be examined for the frequency count of the materials and kinds of activities selected to provide initiation and reinforcement of learning experiences in the skill areas recommended.

Two games, "Jumbo Color Dominoes," and "Landscape Peg Set" (Playskool Co.) were distributed to the Detroit Head Start Experimental with checklist centers. Teachers were asked to acquaint children with these games and encourage the frequent use of these materials. The designs, shapes, and colors of these materials could be useful in optional visual discrimination practice as well as reinforcement of color and number concepts. No special evaluation of these materials was planned.

The Frostig Experimental Groups used materials designed to foster sensory motor training and body awareness. Walking beams, crawl through tunnels, balance beams, "balls on a string," and floor mats were furnished for the training rooms.

Only floor mats for rolling and crawling were provided as special materials in the Doman Delacato training room.

All centers were furnished the regular complement of Head Start supplies and play equipment. All centers in this study received the services and benefits of the regular Head Start Program.

Method

Of 118 Head Start Centers, 15 Head Start Centers were randomly selected to participate in this study. All centers were located in the inner city area and were

*Publications for Kindergarten Teachers, Department of Early Childhood Education, Detroit Public Schools.

matched according to such factors as incomes, rates of intactness of home, etc. Eight of these centers were designated as experimental centers. Seven centers were designated control centers. The Bereiter Experimental Center had no specific control center as it was felt that any one of the five Detroit Head Start Control Centers would be acceptable as a control center.

Children participating in the study were randomly selected from the membership reported at each center. The final experimental and control study groups and numbers of children included in the study at each center are reported in Table I.

Table I

Name of Group	Center	Number of Children
Detroit Head Start Experimental Centers (With Experience Record)	A	22
	B	18
	C	16
	D	13
	E	19
Detroit Head Start Control Centers	F	19
	G	16
	H	12
	I	13
	J	13
Frostig Experimental Center	Y	13
Frostig Control Center	T	14
Doman Delacato Experimental Center	Z	111
Doman Delacato Control Center	S	62
Bereiter Experimental Center	X	12

Observations of Test Results

Data from the 1967 Head Start Program are presented in Tables II to VI which show the amount of change from pretest to posttest on four variables which give an assessment of children's readiness for school. Data are reported for the total Head Start Sample as well as for boys, ages 4 years 0 months through 4 years 11 months and 5 years 0 months through 5 years 11 months and for girls in the same age ranges.

The data in Table II, indicate that the total Head Start population showed improvement at the .01 level of significance (or better) on the variables evaluated in this report: vocabulary, total readiness for school, achievement ability assessment, and social-emotional behavior. The defined growth areas for these variables are discussed below to give a clearer understanding of the importance of the gains cited:

1. The Vocabulary variable indicates the level of language development and an index of the child's understanding of both the meaning and use of nouns and verbs.

2. The scores generated for the Readiness Total variable are predictive of the present level of both reading readiness and number readiness.

3. The Achievement-Ability variable measures persistence in completing tasks, independence in working out solutions, hand-eye coordination, and response to environment as it pertains to the method and quality of thinking.

4. The Social-Emotional variable indicates the level of social-emotional maturity of the child and gives an indication of the child's ability to adjust in the school situation. Important in this assessment are maturation, goals for self, and self-identity.

Reference to Table III reveals that boys in the 4-4.11 age range had lower basal scores on all variables than girls of the same age. The mean gain in vocabulary raw score for both boys and girls was 1.9; however, the basal score of girls was 1.3 higher than that of the boys. The boys' gain score of 9.7 in overall readiness (significant at .01) was 2.9 points higher than the girls significant gain score of 6.8 in overall readiness.

Table II

Summary of Vocabulary and Readiness Test
Results of Total Head Start Sample, Summer 1967

Growth Areas	Pretest	Posttest	Change*
Peabody Picture Vocabulary Test	36.8	38.8	+2.0
Brenner Developmental Gestalt Test of School Readiness			
Readiness Total	26.2	32.9	+6.7
Achievement-Ability	20.7	22.6	+1.9
Social-Emotional	24.3	25.2	+ .9

N = 373
*All changes were significant at .01

Table III

Comparison of Boys and Girls at Different Age Levels
Means of Scores on Pretests and Posttests with the Peabody Picture Vocabulary Test and the Brenner Developmental Gestalt Test os School Readiness
Head Start--Total Sample, 1967

Growth Area	Raw Scores of Pupils 4.0 - 4.11 Years Old			Raw Scores of Pupils 5.0 - 6.0 Years Old		
	Pretest	Posttest	Gain	Pretest	Posttest	Gain
Vocabulary						
Boys	33.5	35.4	1.9	37.9	40.3	2.4**
Girls	34.8	36.7	1.9	38.8	40.0	1.2
Readiness Total						
Boys	17.5	27.2	9.7**	25.7	33.6	7.9**
Girls	25.3	32.1	6.8**	27.8	37.1	9.3**
Achievement-Ability						
Boys	19.3	20.9	1.6*	19.9	21.8	1.9**
Girls	21.2	22.5	1.3	21.1	24.6	3.5**
Social-Emotional						
Boys	22.6	23.9	1.3	23.7	25.0	1.3*
Girls	25.8	25.7	-.1	25.4	26.8	1.4*

N = 54 boys, 56 girls, age 4.0 - 4.11 N = 92 boys, 91 girls, age 5.0 - 6.0
*Significant at .05 **Significant at .01

Table IV

Comparison by Sex of Pupils at Different Age Levels
Means of Scores of Pretests and Posttests with the Peabody Picture Vocabulary Test and the Brenner Developmental Gestalt Test of School Readiness
Head Start--Total Sample, 1967

Growth Area	Raw Scores of Girls			Raw Scores of Boys		
	Pretest	Posttest	Gain	Pretest	Posttest	Gain
Vocabulary						
Age 4.0 - 4.11	34.8	36.7	1.9	33.5	35.4	1.9
Age 5.0 - 6.0	38.8	40.0	1.2	37.9	40.3	2.4**
Readiness Total						
Age 4.0 - 4.11	25.3	32.1	6.8**	17.5	27.2	9.7**
Age 5.0 - 6.0	27.8	37.1	9.3**	25.7	33.6	7.9**
Achievement-Ability						
Age 4.0 - 4.11	21.2	22.5	1.3	19.3	20.9	1.6*
Age 5.0 - 6.0	21.1	24.6	3.5**	19.9	21.8	1.9**
Social-Emotional						
Age 4.0 - 4.11	25.8	25.7	-.1	22.6	23.9	1.3
Age 5.0 - 6.0	25.4	26.8	1.4*	23.7	25.0	1.3*

N = 56 pupils, age 4.0 - 4.11 N = 54 pupils, age 4.0 - 4.11
N = 91 pupils, age 5.0 - 6.0 N = 92 pupils, age 5.0 - 6.0
*Significant at..05 **Significant at .01

Table V

Summary of Vocabulary and Readiness Test Results from
Experimental and Control Centers--1967 Detroit Summer Head Start Program

Identification of Sample	N	Peabody Picture Vocabulary		Brenner Developmental Gestalt Readiness Test	
		Pretest	Posttest	Pretest	Posttest
TOTAL HEAD START SAMPLE	373	36.8	38.8**	26.2	32.9**
Boys, Age 4-4.11	54	33.5	35.4	17.5	27.2**
Boys, Age 5-6.0	92	37.9	40.3**	25.7	33.6**
Girls, Age 4-4.11	56	34.8	36.7	25.3	32.1**
Girls, Age 5-6.0	91	38.8	40.0	27.8	37.1**
HEAD START, EXPERIENCE RECORD EXPERIMENTAL CENTERS					
Center A	22	35.5	37.3	32.3	45.7**
Center B	18	31.6	42.6**	30.0	37.6
Center C	16	27.5	39.7**	38.2	42.2
Center D	13	41.7	42.9	37.6	44.0
Center E	19	41.6	43.0	22.3	23.9
HEAD START, EXPERIENCE RECORD CONTROL CENTERS					
Center F	19	39.6	40.2	23.6	41.6**
Center G	16	37.4	36.8	25.3	30.1**
Center H	12	36.1	36.2	15.2	26.9**
Center I	13	40.8	38.8	50.6	50.3
Center J	13	39.5	42.0	31.7	37.7**
EITER EXPERIMENTAL					
Center X	12	32.1	34.7	28.4	35.1**
FROSTIG PROGRAM					
Center Y (Experimental)	13	34.0	38.9**	28.3	32.1
Center T (Control)	14	37.5	41.5*	30.4	32.5
DOMAN DELACATO PROGRAM					
Center Z (Experimental)	111	36.6	37.1	25.3	30.8**
Center S (Control)	62	40.7	41.5	28.2	29.0

**Difference between pre- and posttest significant at .01
*Difference between pre- and posttest significant at .05

Table VI

Percents of Head Start Pupils' Attaining Levels of School Readiness--Brenner Gestalt Test

	Degree of Readiness																
	Low				Low Average				High Average				High				
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest		Pretest		Posttest		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
TOTAL READINESS																	
Total 1967 Head Start Sample	179	54	97	32	93	27	111	38	45	13	58	19	21	6	34	11	
Boys--Total Sample	98	60	54	37	43	26	57	39	20	12	23	16	4	2	12	8	
Girls--Total Sample	81	46	43	28	50	29	54	36	25	15	35	22	17	10	22	14	
	Inadequate				Fair				Average				Good				Excellent
	Pretest		Posttest		Pretest		Posttest		Pretest		Posttest		Pretest		Posttest		Pretest Posttest
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N % N %
ACHIEVEMENT-ABILITY																	
Total 1967 Head Start Sample	60	20	27	9	76	25	77	26	118	39	121	41	44	14	50	17	7 2 22 7
Boys--Total Sample	36	25	17	12	33	22	44	30	54	36	55	38	20	14	24	16	4 3 6 4
Girls--Total Sample	24	15	10	6	43	27	33	22	64	41	66	44	24	15	26	17	3 2 16 11
SOCIAL-EMOTIONAL BEHAVIOR																	
Total 1967 Head Start Sample	33	11	10	3	44	14	41	13	127	42	141	48	67	22	65	22	33 11 40 14
Boys--Total Sample	23	16	5	3	22	15	24	16	65	44	72	50	22	15	31	21	15 10 14 10
Girls--Total Sample	10	6	5	3	22	14	17	11	62	39	69	46	45	29	34	23	18 12 26 17

Posttest results reported in Table III also indicate lower basal scores on the four measured variables for boys than for girls in the 5-6.0 age range. The vocabulary gain score for the boys (2.4, significant at .01) is twice the gain reported for the girls (1.2) and gives evidence of nearly equal vocabulary functioning level for both boys and girls of this age at the time of the posttest. The girls, however, surpass the boys in significant mean gain on the other variables of total-readiness, achievement-ability, and social-emotional behavior.

The data in Table IV are grouped for ease in examining performance of girls and boys separately. Both boys and girls of age 5 years made greater gains than boys and girls in the 4 year age group.

In the summary of vocabulary and readiness test results from the experimental and control centers reported in Table V, all centers report positive vocabulary raw scores gains except centers I and G which have exhibited lower posttest performance. The reported gains are significant for centers B, C, Y, and T. Of the Centers reporting significant gains in raw scores on the vocabulary test, the gain of 11.0 for Center B and 12.2 for Center C merit attention as the range in differences in raw scores means on the same vocabulary test is -2.5 to +12.2

All centers report positive mean score gains in total overall readiness except Center I. The gains are significant for Centers A, F, G, H, I, X, and Z.

The data of Table V further indicate that the overall readiness totals of the Head Start, Experience Record Control schools show superiority over the Head Start, Experience Record Experimental schools in mean gains except in Center I, but inferiority to the Head Start, Experience Record Experimental schools on the vocabulary mean gains in raw score. Three experimental centers A, X, and Z also show superiority in overall readiness and inferiority on other measures.

The data presented in Table VI give an indication of the numbers and percents of children in the total Head Start Sample attaining measurable levels of overall readiness for schools on both pretests and posttests. The total readiness score is the most important datum resulting from the Brenner Test. This score is used for conversion to a school readiness classification as defined in the test manual for the chronological age of the child at the time of testing. The range of scores for determining readiness categories used in this testing were defined by Brenner as:

Low Readiness	0 - 24
Average (Low)	25 - 39
Average (High)	40 - 54
High	55 - 80

Included in the same table are the achievement-ability and social-emotional behavior assessments of the total Head Start Sample. The achievement-ability rating provides an index of functional ability at the time of testing which is predictive of potential performance in school. The social-emotional rating provides insights into the personality make-up of the children. This rating is a projection of the relative strength of a child in relation to responsibility, self-confidence, goal direction, motivation, and interest in school and learning. The range of scores for designating categories of readiness for both the achievement-ability and social-emotional ratings are as follows:

Inadequate	8 - 13
Fair	14 - 19
Average	20 - 26
Good	27 - 33
Excellent	34 - 40

It can be observed that there is a positive shift in both numbers and percents of children from the low readiness category right on through the high readiness designation from pretest to posttest.

The same positive shift in both numbers and percents of children on the achievement ability and social-emotional behavior assessments in evident in the lower portion of the same table. The shift in rating is from "inadequate" through "excellent".

It may be noted that there was, for approximately one third of the children, an upward shift from pre- to posttesting in both readiness for reading and in achievement ability. The upward shift in social-emotional behavior from pre- to posttesting was considerably smaller; about one sixth of the pupils showed improvement. (These figures are approximations based on the assumption that the pupil losses from pre- to posttesting were prorated among the different ability or adequacy groups on the pretesting.)

It may be noted in Table VI that there is, from pretest to posttest in reading readiness, an upward shift of about 114 or approximately 1/3 of the pupils (there was a loss of 38 pupils from pre- to posttest). There was an upward shift, from pretest to posttest achievement-ability, of about 96 or approximately 31% of the pupils. (There was only a loss of 8 pupils from pre- to posttest in this category. In the social-emotional behavior category, from pretest to posttest, there was an upward shift of about 50 or approximately 16% of the pupils. (There was a loss of 7 pupils from pretest to posttest in this category.)

Discussion

From the data presented on the Total Head Start Sample (Table V), it can be inferred that both experimental and control groups made progress. Every one of the experimental centers except D and E, shows significant superiority in one respect or another over the control centers. Four of the control centers show significant superiority in overall school readiness over the experimental centers excluding Center A, whose significant mean gain is 13.4 in overall school readiness.

The inference might be made that the less time spent in control groups on experimental factors has resulted in slightly less improvement on vocabulary score, but greater improvement on total school readiness. Further study is necessary to determine whether greater enrichment in control centers compensates for lessened emphasis on vocabulary development.

The question must be asked whether the experimental methods of the Frostig Program are succeeding at the expense of overall readiness involving achievement-ability and social-emotional behavior assessment. The reverse of this is observed in the results of the Doman Delacato Experimental Center Y. While the Doman Delacato method does not produce significant changes in vocabulary, it produces them in Gestalt total.

The patterns of significant differences in the data indicate that individual teachers may be a major factor which accounts for some of the differences. It is the evaluator's opinion, unbacked by objective data, that teachers should be selected on the basis of training, skills, and enthusiasm to work in programs with disadvantaged preschool children.

EVALUATION OF PERSONAL EXPERIENCE RECORD AND HANDBOOK--"YOUNG CHILDREN IN SCHOOL"

Teachers utilizing the children's Personal Experience Record responded to a questionnaire designed to evaluate the specific contribution of the record form in the experimental summer program. Only six of the teachers using the personal experience record, returned the questionnaire which asked that questions be answered on a 0-5 rating scale, with 5 being the best possible rating, 1 being the lowest possible rating and 0 indicating that the question either did not apply to their situation or that the teacher could not answer the question.

The following questions concerned the Children's Personal Experience Record:

1. To what extent did the Children's Personal Experience Record contribute to an awareness of the importance of different activities in preparing pupils for reading?

2. To what extent did the Children's Personal Experience Record contribute to an awareness of the skill training important in preparing pupils for reading? (Auditory and visual discrimination, concrete and abstract quantitative thinking, etc.)

3. To what extent did the values of using the Children's Personal Experience Record compensate for the extra time required for filling it out?

The ratings tallied for each question were:

	0 Not Applicable	1 Low	2 Low Average	3 High Average	4 High	5 Very High
Question One		17% (1)	50% (3)			33% (2)
Question Two			50% (3)	17% (1)		33% (2)
Question Three		17% (1)	33% (2)	33% (2)	17% (1)	

N = 6 (only teachers using the digitek form)

All other experimental and control teachers were given the experimental handbook, Young Children In School to use as a resource in identifying curriculum practices which aid in teaching the skills necessary for successful school experience, and aid in selecting activities for a well-balanced preschool curriculum.

The following questions were used to evaluate the experimental handbook, Young Children In School:

4. To what extent did you actually make use of the suggestions in the experimental handbook, Young Children In School?

5. To what extent did the handbook assist you in identifying curriculum practices which aid in teaching the skills necessary for successful school experience?

6. To what extent did the listing of activities and materials under specific skills taught, aid in your choice of activities for a balanced preschool curriculum?

7. To what extent does the selection of activities and materials in the handbook allow for the individual differences of children in a preschool program?

8. How strongly would you recommend the use of the handbook, Young Children In School in the regular year-long kindergarten program?

The ratings submitted by each group of teachers are presented separately. Experimental teachers using the Children's Personal Experience Record and instructed to use the booklet Young Children In School on a regular basis in selecting activities for the children's progr[illegible] presented these ratings: (The low ratings are not given by the same person.)

	0 Not Applicable	1 Low	2 Low Average	3 High Average	4 High	5 Very High
Question Four			17% (1)	67% (4)		17% (1)
Question Five		17% (1)	50% (3)	17% (1)	17% (1)	
Question Six		17% (1)		50% (3)	33% (2)	
Question Seven	17% (1)		33% (2)	17% (1)	33% (2)	
Question Eight		17% (1)		33% (2)	33% (2)	17% (1)

N = 6

All other teachers in the Experimental Program were given the handbook, Young Children In School but were given no specific instructions regarding its utilization. Twenty-eight teachers submitted these ratings:

	0 Not Applicable	1 Low	2 Low Average	3 High Average	4 High	5 Very High
Question Four	25% (7)		7% (2)	36% (10)	18% (5)	14% (4)
Question Five	18% (5)		7% (2)	25% (7)	21% (6)	29% (8)
Question Six	21% (6)		4% (1)	21% (6)	25% (7)	29% (8)
Question Seven	29% (8)			39% (11)	25% (7)	7% (2)
Question Eight	18% (5)			7% (2)	32% (9)	43% (12)

N = 28

Observations

Digitek Form

The data presented indicate that sixty-seven percent of teachers who were using the Digitek Form did not feel that its use contributed to an awareness of the importance of different activities in preparing pupils for reading. Thirty-three percent of the teachers using the Digitek Form rated it very high in making them aware of the importance of different activities in preparing pupils for reading.

Sixty-seven percent of the teachers utilizing the Children's Experience Record Form rated it average and thirty-three percent rated it very high. On the basis of these ratings, it may be concluded that teachers consider it to be a satisfactory tool contributing to an awareness of the skill training important in preparing pupils for reading.

Eighty-three percent of the teachers indicated that the values of using the form compensated for the extra time required filling it out. Sixty-six percent rated it average and seventeen percent rated it high. Seventeen percent rated it as low.

Experimental Handbook

The experimental handbook, Young Children In School, was distributed to all teachers in the experimental program. Teachers who used the Children's Experimental Record Form were asked to use the handbook as a sourcebook for the selection of varied experiences in all readiness categories. The other teachers were free to select any experiences from any category they wished. The perceived value of using the handbook differed between the groups of teachers.

Eighty-four percent of the teachers using the Record Form made moderate use of suggestions found in the booklet, while seventeen percent used the booklet very extensively. In contrast thirty-two percent of the teachers who did not use the Record Form used the booklet very extensively, while forty-two pwecent made moderate use of it.

Seventeen percent of the Record Form users and fifty percent of the other teachers felt that the handbook was very helpful in identifying curriculum practices which aid in teaching skills necessary for successful school experience.

The listing of activities and materials under specific skills taught aided thirty-three percent of record form users and fifty-four percent of the other teachers in choosing activities for a balanced preschool curriculum.

Teachers were in agreement that the selection of activities and materials in the handbook does allow for individual differences of children in a preschool program. Thirty-three percent of record form users and thirty-two percent of the others rated this use as high. Only seventeen percent of the record form users rated this as low.

Using a high and very high rating, fifty percent of record form users and seventy-five percent of others highly recommend use of the handbook, Young Children In School in the regular year-long kindergarten program.

Many ratings were based on what individual teachers viewed as obstacles standing in the way of practical use of the suggestions found in the handbook. Of the thirty-four teachers responding to this question, the following difficulties were cited:

	Problem	Frequency
1.	Materials not available to implement suggestions (this involved distribution problems, warehousing, etc.).	12
2.	Insufficient time to try some of the activities because of program schedule.	10
3.	Some activities were too advanced for these pupils.	8

Discussion

From the data on the total Head Start Program and the questionnaire returned by teachers, it can be inferred that while classes of teachers using record forms made more significant overall gains, these teachers did not rate the value of using the handbook as highly and consistently as other teachers. This may be attributed to the fact that these teachers felt the pressures of marking the weekly Digitek Form as well as trying to balance their selection of activities from all skill areas represented in the handbook. Many of the experimental record form users said that there simply was not enough time for everything. These teachers expressed appreciation for the addition of a research aide to their staffs and chose to remain in the experimental program when they were given the opportunity to be relieved of this extra responsibility.

The other teachers generally agreed that using the handbook was of great value in providing a balance of activities important in fostering general readiness. While children in these teachers' classes achieved significant total readiness gains, their vocabulary gains were not significant. The total readiness gain indicates perceptual, conceptual and motor skill gains. These children may have had many good experiences but not enough of the kind that foster vocabulary development on a regular basis.

In interpreting and implementing the activities in the handbook, there were differences in feeling as to how much teachers could do with available materials. In feedback sessions, this evaluator noted that elementary school teachers felt hampered in their selections of activities suggested in the handbook because specific materials for those activities were not provided. Teachers trained in preschool and kindergarten were quicker to suggest adaptive uses of available materials.

Parent aides and student aides employed in the 1967 Head Start Experimental Centers were given an opportunity to make recommendations for improvements of the experimental programs in their centers. The free responses have been categorized and are reported without interpretation in the following table.

Table VII

Recommendations from Centers	Frequency Parent Aide	Student Aide
Provide play time for children (only 10 minutes per day)		
Center X	1	2
Too much testing of children		
Center Y	5	3
Too many bosses		
Center Z	5	
Too much time for lunch and snacks		
Center Y	3	
Good Program		
Center B	1	
Center X		2
Center Z		2
Center F		1
Canter A		2
Need more cooperative teachers		
Center Z		5
Center A		1
Teacher too busy		
Center X		2
Need more interesting program for parents		
Center C	1	
Center Z	5	
Center D	1	
Center E	1	
Center A	1	
Student aides need discipline		
Center X	1	
Center A		1

Table VII

(Continued)

Recommendations from Centers	Frequency	
	Parent Aide	Student Aide
Need longer Head Start program		
Center C	2	
Center E	2	
Center B	2	
More outside activities		
Center E	2	
Center B	1	
Supplies should arrive in time		
Center A	1	
Center Y	1	

Conclusions

1. The data obtained in this study provide baseline data for future comparisons of Head Start Samples.

2. Differences in mean gains in vocabulary and overall school readiness made by the total Head Start Sample on test-retest were significant at .01.

3. The Head Start Experience Record Control schools showed superiority over the Head Start Experience Record Experimental schools in mean gains of total school readiness (except Center I), but inferiority to the Head Start, Experience Record Experimental schools on the vocabulary mean gains in raw score.

4. The Doman Delacato Experimental and Bereiter Experimental groups showed superiority over the Frostig Experimental and Control groups in mean gain of total school readiness, but inferiority to the Frostig Experimental and Control groups on mean gains in vocabulary raw score.

5. The data support a recommendation that modifications of curricular or exercise components of the experimental methods observed in the 1967 Summer Head Start Program be considered in shaping curricular routines for future Head Start Programs. A suggested curricular program might include:

    a. Provision of the Handbook, Young Children In School, to assist teachers in selecting experiences designed to foster growth in skill areas important for success in school:

auditory discrimination and memory
musical discrimination and memory
quantitative thinking
motor control
tactile experience

b. In-service training program for teachers which would provide an opportunity for exploring new curricular developments in early childhood education and teaching techniques.

c. Use of an individual evaluative checklist for each child to assess his needs in the skill areas.

d. An experimental program of perceptual training experiences designed to complement the regular Head Start curriculum. This experimental program need not include the Frostig Program as followed in Center Y or the exercises followed at Center Z where a very modified Doman Delacato program was followed. The content and intensity for an experimental program should be explored by the Early Childhood Articulation Committee.

6. There is no evidence in the data collected and reported in this study of the overwhelming superiority of any one of the curricular methods tried and observed in which the teaching emphasis is different than prescribed by the basic Detroit Head Start and Kindergarten curricular multi-sensory program.

7. Teachers felt that the experimental handbook, Young Children In School, was very helpful in identifying curriculum practices which aid in teaching skills necessary for successful school experience.

8. The patterns of significant differences in the data indicate that it is important in any future Head Start study to control for, as far as possible teacher variables which can influence results. It is recommended that consideration be given to secure qualified teachers with preschool and kindergarten preparation for placement in the 1968 Summer Head Start Centers.

9. Arrangements with the Research and Development Department should be made early for assistance in design of any future Head Start Studies. This will provide the necessary lead time to plan for an efficient collection of meaningful data related to the expressed purposes of the study, order appropriate evaluative materials, secure and train qualified testers, and arrange for coordination of the research effort. Coordination of the research effort includes supervision of testers and supervision of the experimental program under study.